WHAT IS CLAIMED IS:

1. An electrochemical cell comprising:

a first electrochemical cell component having a mating surface;

a cured sealant composition disposed over the mating surface of the first electrochemical cell component, wherein the cured sealant composition comprises reaction products of a polymerizable (meth)acrylate component and a boron-containing initiator; and

a second electrochemical cell component having a mating surface abuttingly disposed over the cured sealant composition to provide a seal thereat.

2. The cell of claim 1, wherein the mating surface of the first cell is a plastic or plastic-containing substrate.

3. The cell of claim 2, wherein the plastic or plastic-containing substrate is selected from the group consisting of an electrically conductive substrate, a thermally conductive substrate and combinations thereof.

4. The cell of claim 2, wherein the plastic or plastic-containing substrate is a molded substrate selected from the group consisting of an injection molded substrate, a compression molded substrate and combinations thereof.

5. The cell of claim 2, wherein the substrate is a machined substrate or a vacuum-formed substrate.

6. The cell of claim 2, wherein the plastic or plastic-containing substrate is electrically conductive or includes

electrically conductive particles.

7. The cell of claims 1 or 2, wherein the cured composition is adhesively bonded to the mating surface of the first cell, and further wherein the cured sealant composition is adhesively bonded to the mating surface of the second fuel cell.

8. The cell of claims 1 or 2, wherein the cured composition is adhesively bonded to the mating surface of the first cell, and further wherein the cured sealant composition is not adhesively bonded to the mating surface of the second fuel cell.

9. The cell of claim 1, wherein the first cell component is selected from the group consisting of a cathode flow field plate, an anode flow field plate, a gas diffusion layer, an anode catalyst layer, a cathode catalyst layer, a membrane electrolyte, a membrane-electrode-assembly frame, and combinations thereof.

10. The cell of claim 9, wherein the second cell component is selected from the group consisting of a cathode flow field plate, an anode flow field plate, a gas diffusion layer, an anode catalyst layer, a cathode catalyst layer, a membrane electrolyte, a membrane-electrode-assembly frame, and combinations thereof, provided that the second cell component is different from the first cell component.

11. The cell of claim 1, wherein the cured sealant composition comprises a curable (meth)acrylate component, wherein the curable (meth)acrylate component comprises a mono-

functional (meth)acrylate component, a poly-functional (meth)acrylate component, and combinations thereof.

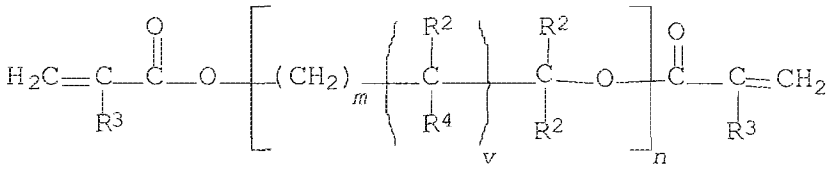
12. The cell of claim 11, wherein the mono-functional (meth)acrylate component is embraced by compounds of the general structure:

$$CH_2=C(R)COOR^1$$

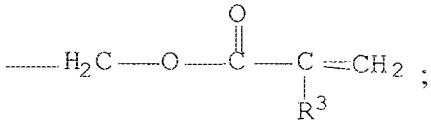
wherein R is H, CH_3, C_2H_5 or halogen, and

R^1 is C_{1-8} mono- or bicycloalkyl, a 3 to 8-membered heterocyclic radial with a maximum of two oxygen atoms in the heterocycle, H, alkyl, hydroxyalkyl or aminoalkyl wherein the alkyl portion is C_{1-8} straight or branched carbon atom chain.

13. The cell of claim 11, wherein the poly-functional (meth)acrylate component is embraced by compounds of the general structure:

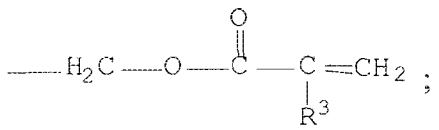


wherein R^2 is selected from hydrogen, alkyl of 1 to about 4 carbon atoms, hydroxyalkyl of 1 to about 4 carbon atoms or



R^3 is selected from hydrogen, halogen, and alkyl of 1 to about 4 carbon atoms and C_{1-8} mono- or bicycloalkyl, a 3 to 8 membered heterocyclic radical with a maximum of 2 oxygen atoms in the ring;

R^4 is selected from hydrogen, hydroxy and



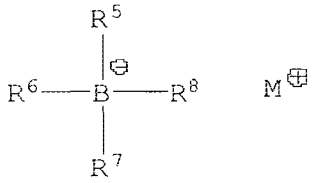
m is an integer from about 1 to about 8;

n is an integer from about 1 to about 20; and

v is 0 or 1.

14. The cell of claim 1, wherein the boron-containing initiator comprises an alkyl borohydride.

15. The cell of claim 14, wherein the alkyl borohydride is embraced by compounds of the following structure:

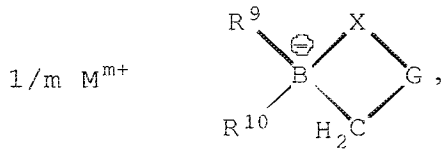


wherein R^5 is a C_1 to C_{10} alkyl,

R^6, R^7 and R^8 which may be the same or different, are H, C_1 to C_{10} alkyl, C_3 to C_{10} cycloalkyl, phenyl, phenyl-substituted C_1 to C_{10} alkyl, or phenyl substituted C_3 to C_{10} cycloalkyl, provided that any two of R^1, R^2, R^3 and R^4 may optionally be part of a carbocyclic ring, and

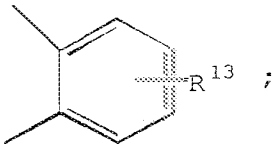
M^+ is a metal ion, an alkyloxy metal ion, an alkali metal ion, a quaternary ammonium cation, and combinations thereof.

16. The cell of claim 14, wherein the alkyl borohydride is embraced by compounds of the following structure:



wherein X is O, S, or CHR^{13} ;

G is $-(CR^{11}R^{12})_n-$ or



R^9 and R^{10}, which may be the same or different, are substituted or unsubstituted C_{1-10} alkyl, or unsubstituted aryl or substituted aryl groups having from about 6 to about 12 carbon atoms;

R^{11}, R^{12} and R^{13}, which may be the same or different, are hydrogen, substituted or unsubstituted C_{1-10} alkyl, substituted or unsubstituted C_{1-10} alkylene, unsubstituted aryl, substituted aryl groups having from about 7 to about 12 carbon atoms;

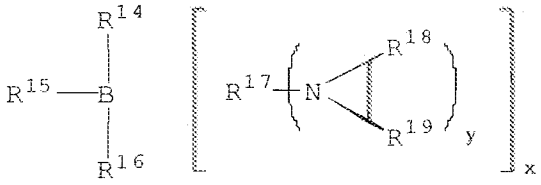
n is the integer from about 1 to about 5;

M is a Group IA metal, Group IIA metal, ammonium, tetraalkylammonium, phosphonium, or metal complex; and

m is from +1 to +7.

17. The cell of claim 1, wherein the boron-containing initiator further includes a polyfunctional aziridine.

18. The cell of claim 1, wherein the boron-containing initiator is a complex of an organoborane and polyaziridine, wherein the organoborane/polyaziridine complex is embraced by compounds of the following structure:



wherein R^{14} is a C_{1-10} alkyl;

R^{15} and R^{16}, which may be the same or different, are C_{1-10} alkyl, C_{3-10} cycloalkyl, phenyl, phenyl substituted C_{1-10} alkyl or C_{3-10} cycloalkyl, provided that any two of R^{14}, R^{15} and R^{16} may optionally be part of a carbocyclic ring;

R^{17} is a polyvalent C_{1-60} alkyl, C_{6-65} aryl, C_{7-66} alkylaryl, optionally substituted or interrupted by one or more hetero-atoms or hetero-atom containing groups;

R^{18} and R^{19}, which may be the same or different, are H or C_{1-10} alkyl;

y from about 1 to about 4; and

x is from about 2 to about 15, provided that y is at least 1.3 times greater than x.

19. The cell of claim 1, wherein the boron-containing initiator is a complex of a trialkyl borane or alkyl cycloalkyl borane and an amine compound,

wherein the amine compound of the organoborane/amine complex is selected from the group consisting of (1) amines having an amidine structural component; (2) aliphatic heterocycles having at least one nitrogen in the heterocyclic ring, wherein the heterocyclic compound may also contain one or more nitrogen atoms, oxygen atoms, sulfur atoms, or double bonds in the heterocycle; (3) primary amines which, in addition, have one or more hydrogen bond accepting groups wherein there are at least two carbon atoms between the primary amine and the hydrogen bond accepting group, such that due to inter- or intramolecular interactions within the complex, the strength of the B-N bond is increased; and (4) conjugated imines; and

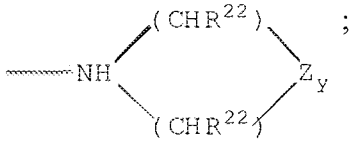
wherein the trialkyl borane or alkyl cycloalkyl borane corresponds to the formula:

$$(R^{20})_3\text{---}B\text{---};$$

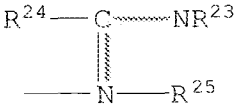
the primary amine corresponds to the formula:

$$\text{---}NH_2(CH_2)b\text{---}(C(R^{21})_2)_a;$$

the organoborane heterocyclic amine complex corresponds to the formula:

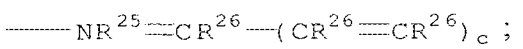


the organoborane amidine complex corresponds to the formula:



; and

the organoborane conjugated imine complex corresponds to the formula



wherein B is boron;

R^{20} is a C_{1-10} alkyl, C_{3-10} cycloalkyl or a cycloaliphatic ring structure formed from two or more of the C_{1-10} alkyl or the C_{3-10} cycloalkyl;

R^{21} is hydrogen, a C_{1-10} alkyl or C_{3-10} cycloalkyl;

R^{22} is hydrogen, a C_{1-10} alkyl or C_{3-10} cycloalkyl;

R^{23}, R^{24}, and R^{25}, which may be the same or different, are hydrogen, C_{1-10} alkyl, C_{3-10} cycloalkyl, or two or more of R^{23}, R^{24} and R^{25} in any combination can combine to form a ring structure which can be a single ring or a multiple ring structure and the ring structure can include one or more of nitrogen, oxygen or unsaturation in the ring structure;

R^{26} is hydrogen, C_{1-10} alkyl or C_{3-10} cycloalkyl, Y, $-(C(R^{26})_2-(CR^{26}=CR^{26})_c-Y$ or two or more of R^{26} can combine to form a ring structure, or one or more of R^{26}an form a ring structure with Y provided the ring structure is conjugated with respect to the double bond of the imine nitrogen; Y is independently in each occurrence hydrogen, $N(R^{27})_2$, OR^{27}, $C(O)OR^{27}$, a halogen or an alkylene group which forms a cyclic ring with R^{25} or R^{26};

R^{27} is hydrogen, C_{1-10} alkyl, C_{3-10} cycloalkyl, C_{6-10} aryl or alkaryl;

Z is oxygen or $-NR^{27}$;

a is an integer of from 1 to 10;

b is 0 or 1, with the proviso that the sum of a and b should be from 2 to 10;

c is an integer of from 1 to 10;

x is an integer of 1 to 10, with the proviso that the total of all occurrences of x is from 2 to 10; and

y is separately in each occurrence 0 or 1.

20 The cell of claim 1, wherein the electrochemical cell is a fuel cell.

21. A method for forming an electrochemical cell comprising:

providing a first and a second electrochemical cell component each having a mating surface;

applying a curable sealant composition to the mating surface of at least one of the first electrochemical cell component or the second electrochemical cell component, wherein the curable sealant composition comprises a polymerizable (meth)acrylate component and a boron-containing initiator;

curing the sealant composition; and

aligning the mating surface of the second electrochemical cell component with the mating surface of the first electrochemical cell component.

22. A method for forming an electrochemical cell comprising:

providing a first electrochemical cell component having a mating surface;

aligning a mating surface of a second electrochemical

cell component with the mating surface of the first electrochemical cell component;

applying a curable sealant composition to at least a portion of the mating surface of at least one of the first or second electrochemical cell components, wherein the curable sealant composition comprises a polymerizable (meth)acrylate component and a boron-containing initiator; and

curing the sealant composition.

23. The method of claim 21 or 22, wherein the first cell component is selected from the group consisting of a cathode flow field plate, an anode flow field plate, a gas diffusion layer, an anode catalyst layer, a cathode catalyst layer, a membrane electrolyte, a membrane-electrode-assembly frame, and combinations thereof.

24. The method of claim 21 or 22, wherein the second cell component is selected from the group consisting of a cathode flow field plate, an anode flow field plate, a gas diffusion layer, an anode catalyst layer, a cathode catalyst layer, a membrane electrolyte, a membrane-electrode-assembly frame, and combinations thereof, provided that the second cell component is different from the first cell component.

25. The method of claim 21 or 22, wherein the curable (meth)acrylate component comprises a mono-functional (meth)acrylate component, a poly-functional (meth)acrylate component, and combinations thereof.

26. The method of claim 25, wherein the curable sealant composition comprises a mono-functional (meth)acrylate ester, a poly-functional (meth)acrylate ester, and combinations

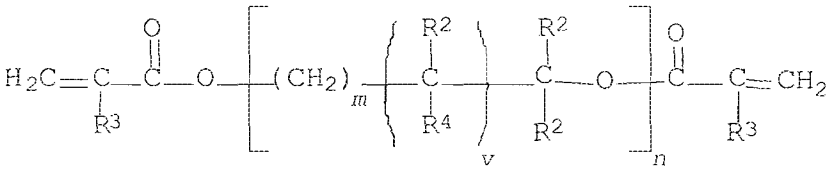
thereof; wherein the mono-functional (meth)acrylate ester is embraced by compounds of the general structure:

$$CH_2=C(R)COOR^1$$

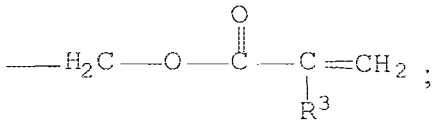
wherein R is H, CH_3, C_2H_5 or halogen, and

R^1 is C_{1-8} mono- or bicycloalkyl, a 3 to 8-membered heterocyclic radial with a maximum of two oxygen atoms in the heterocycle, H, alkyl, hydroxyalkyl or aminoalkyl wherein the alkyl portion is C_{1-8} straight or branched carbon atom chain; and;

wherein the poly-functional (meth)acrylate ester is embraced by compounds of the general structure:

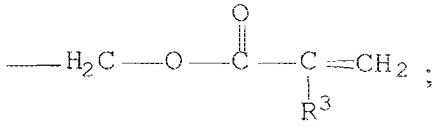


wherein R^2 is selected from hydrogen, alkyl of 1 to about 4 carbon atoms, hydroxyalkyl of 1 to about 4 carbon atoms or



R^3 is selected from hydrogen, halogen, and alkyl of 1 to about 4 carbon atoms and C_{1-8} mono- or bicycloalkyl, a 3 to 8 membered heterocyclic radical with a maximum of 2 oxygen atoms in the ring;

R^4 is selected from hydrogen, hydroxy and



m is an integer from about 1 to about 8;

n is an integer from about 1 to about 20; and

v is 0 or 1.

27. The method of claim 21 or 22, wherein the boron-containing initiator comprises an alkyl borohydride, an organoborane/polyaziridine complex, a complex of a trialkyl borane or alkyl cycloalkyl borane and an amine compound, and combinations thereof.

28. The method of claim 21 or 22, wherein the electrochemical cell is a fuel cell.